Flexible milking

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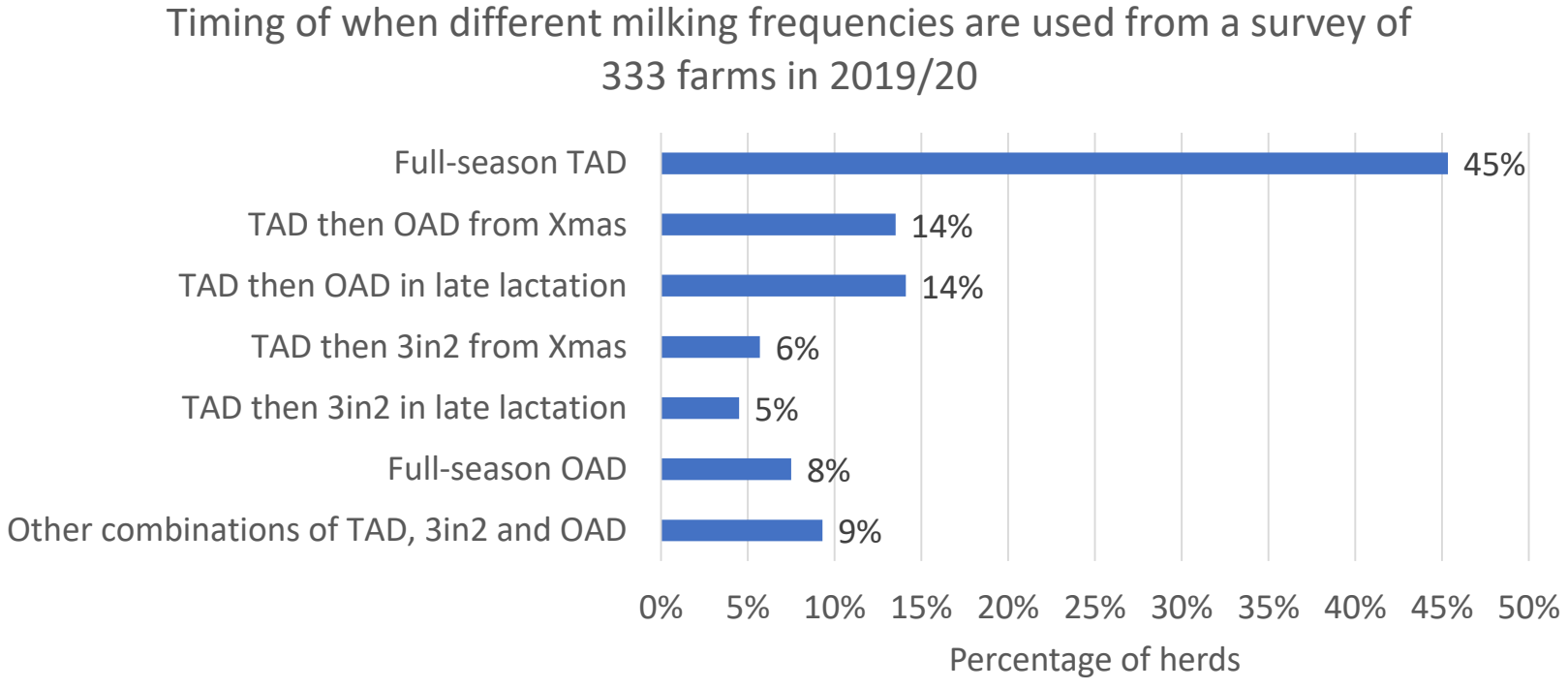
DairyNZ

Why flexible milking?

Can we adapt milking intervals to improve workplace attractiveness?

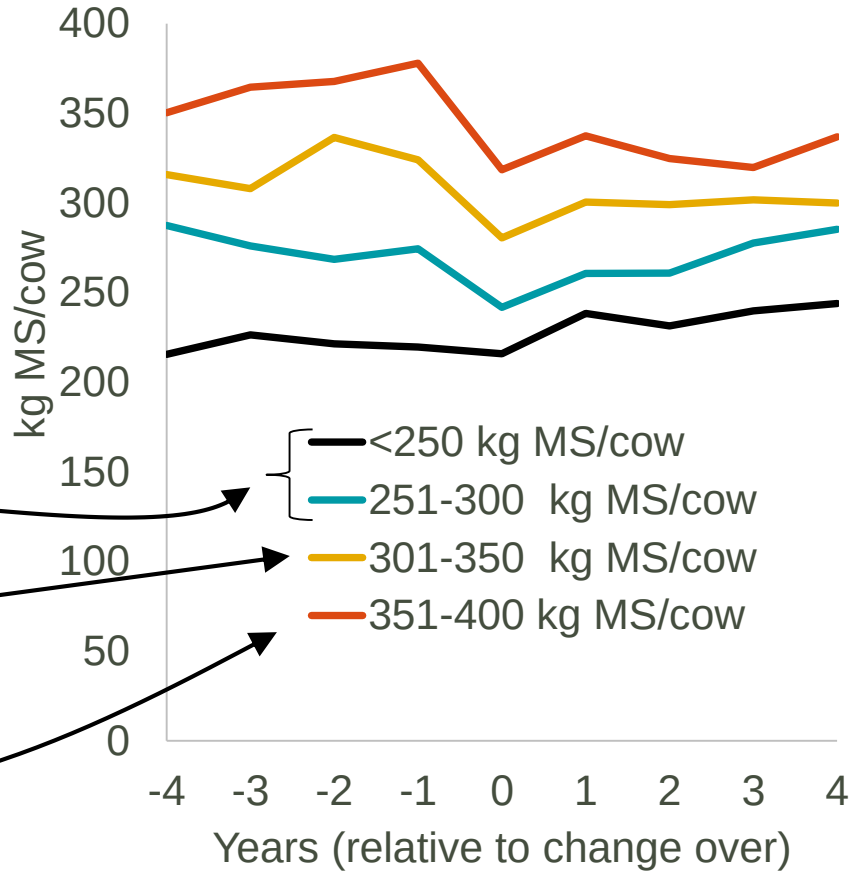
- Hours
- Flexibility


Timing of when different milking frequencies are used from a survey of 333 farms in 2019/20
Full-season TAD
TAD then OAD from Xmas
TAD then OAD in late lactation
TAD then 3in2 from Xmas
TAD then 3in2 in late lactation
Full-season OAD
Other combinations of TAD, 3in2 and OAD
45%
14%
14%
6%
5%
8%
9%
0%
5%
10%
15%
20%
25%
30%
35%
40%
45%
50%
Percentage of herds

Full-season OAD

- Ultimate for flexibility
- Impact on production?

- Well suited
- Could suit
- Suited to 3-in-2?

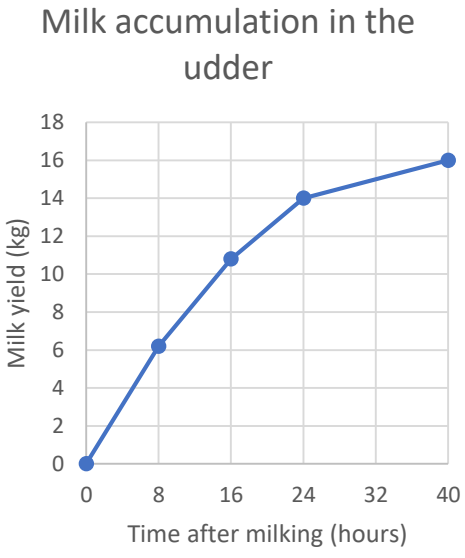


Why 3-in-2?

- OAD milking is a suitable strategy for many farms but harder to justify for others
- Milk secretion linear up to 16-18 hours
  - Effect of consecutive long intervals, higher production?

Can 3-in-2 play a greater role in our farm systems?

- 3-year SFF project “Flexible Milking”
- Increased confidence to adopt, optimise, and support the use of 3-in-2 milking



Davis et. al., (1998)
https://doi.org/10.1017/S0022029997002562

Test system effects with farmlets

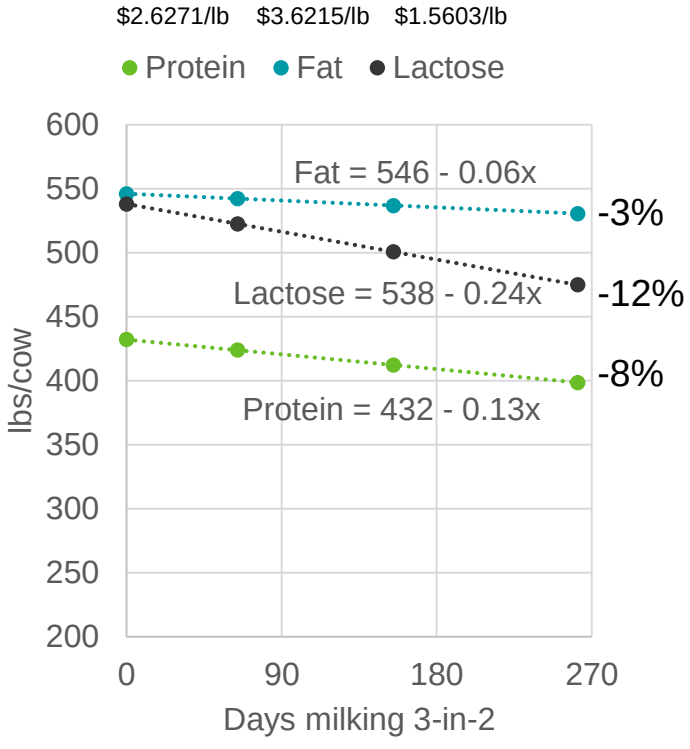
- TAD: 6am, 4pm (10-14)
- 3in2: 5am, 5pm, 11am (12-18-18)
- Stocking rate 3.5 cows/ha (31% heifers)
- Lincoln University Research Dairy Farm

Farmlet production

- Herd producing 11,000 lb milk/cow on TAD, there is likely to be a 4.4 lb/cow/day decrease for each day of 3-in-2
- Not all components affected evenly
  - Higher milk price for 3-in-2
- No difference in SCS

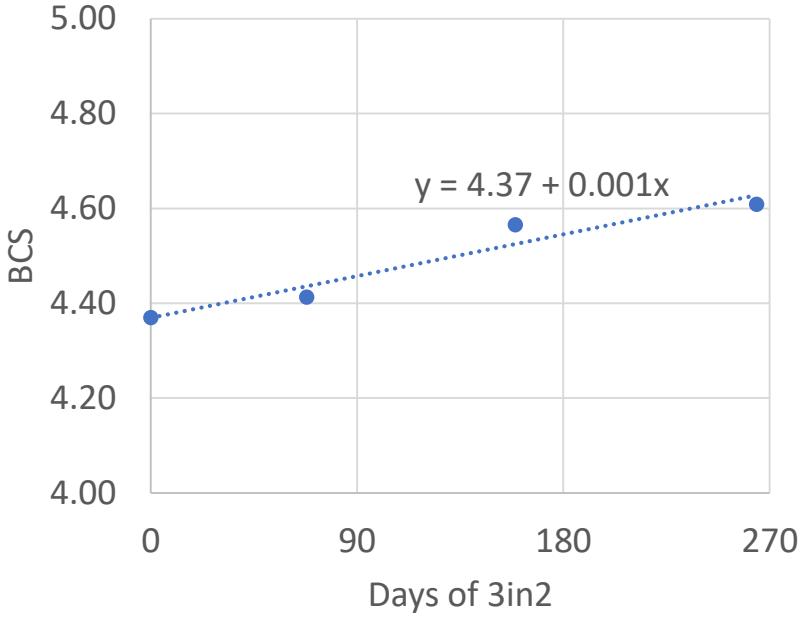
Note: 1 year study, no carry over effects

On commercial farms the additional time may allow improved decisions



BCS @ 8-May

- Increased BCS
- E.g. full-season 3in2 herd BCS 4.62
  - ~0.25 BCS more



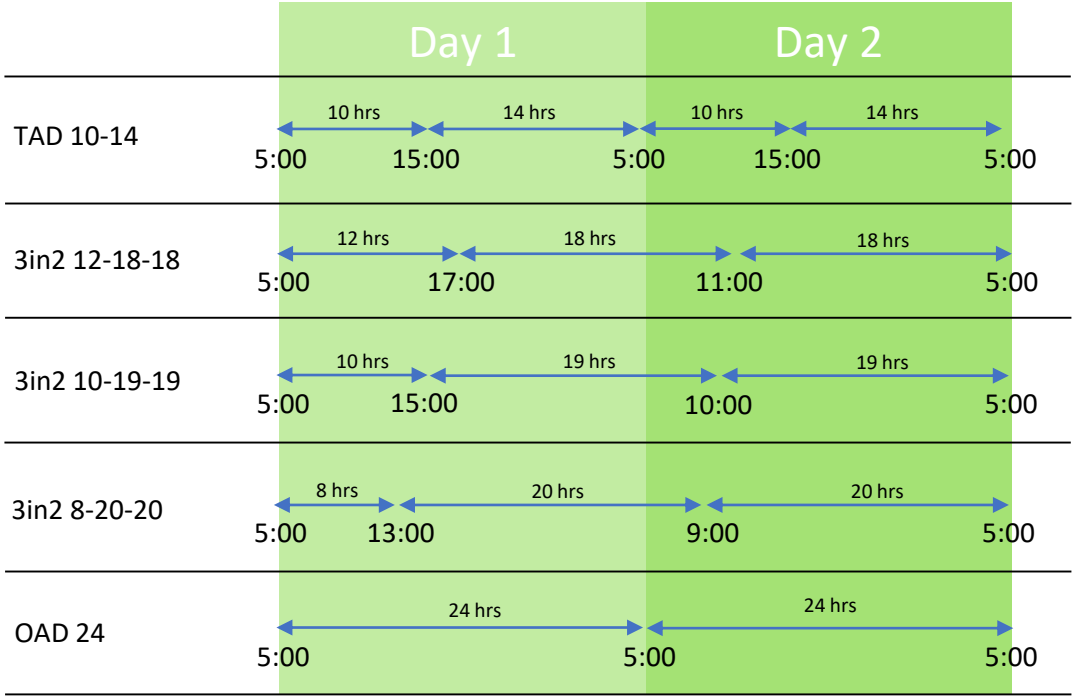
How much flexibility?

- 12-18-18 can still make for a long day
- Is it the number of milkings, or the timing of the milkings that affects production?

- 6 week experiment 11-Sep to 22-Oct at Ashley Dene
- 5x herds of 40 cows
- Average 34 DIM at start

Treatments

Example times



Experiment times

6:30am, 4:30pm

5:00am, 5:00pm, 11:00am

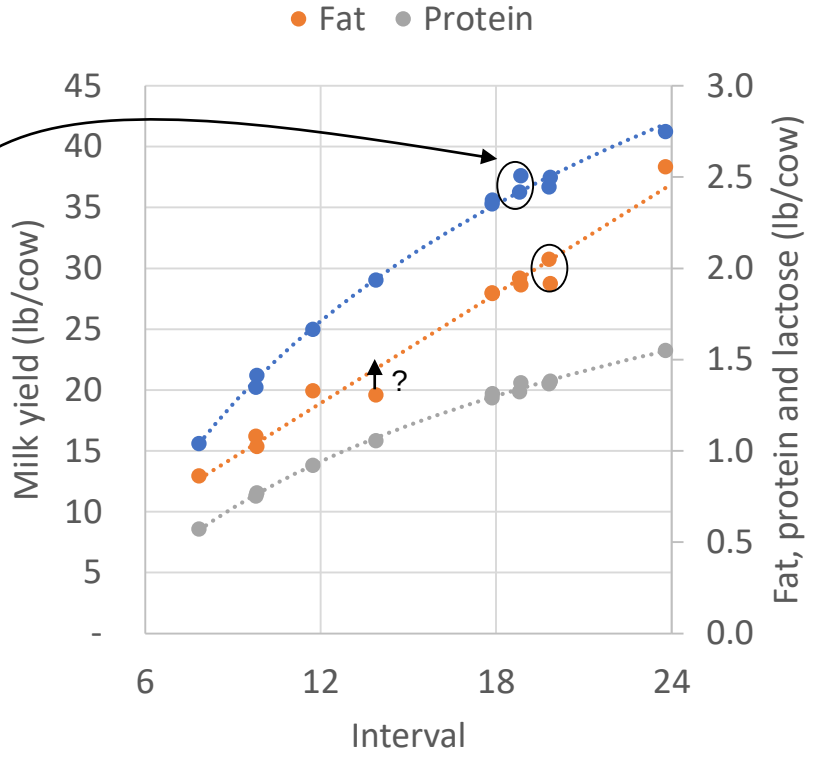
5:30am, 3:30pm, 10:30am

6:00am, 2:00pm, 10:00am

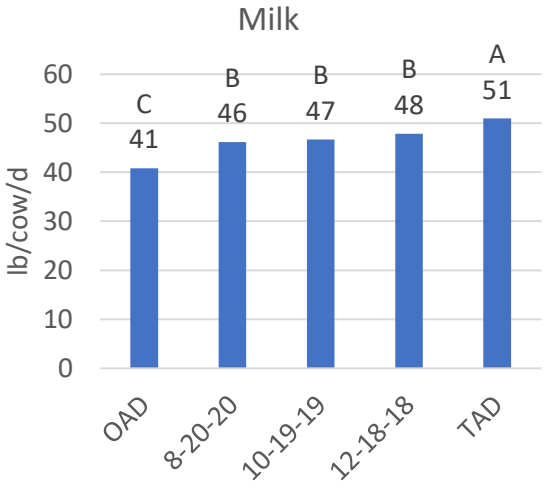
7:00am

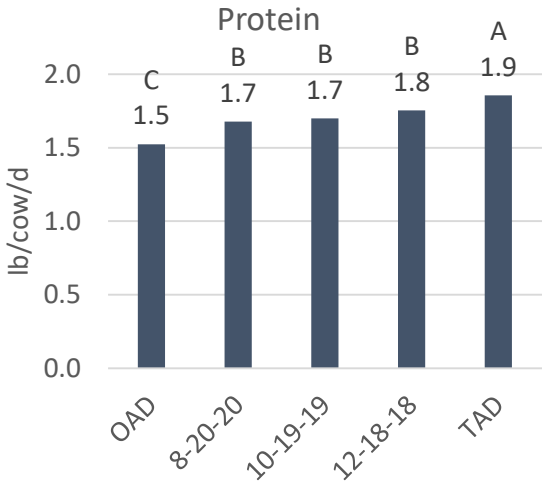
Milk accumulation

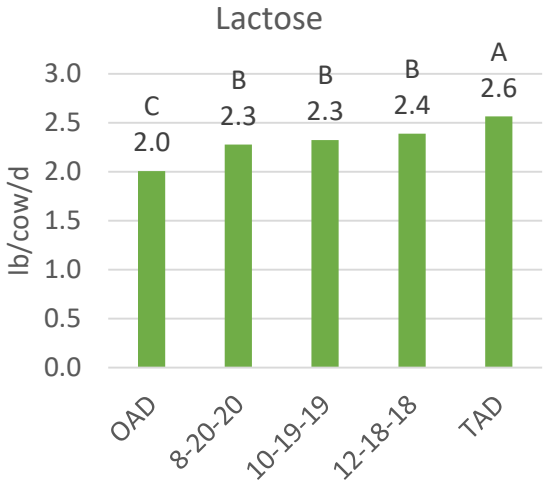
- Matches literature
- Small cost to consecutive long intervals

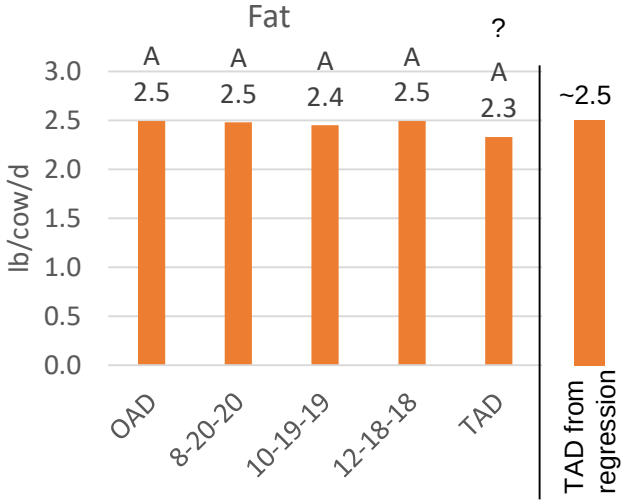


Treatment results









- Number of milkings more important than their timing
- Possible to use more attractive 3-in-2 milking times

Plenty of options

TAD 10-14 h interval

e.g. 5am and 3pm

- Conventional

TAD 8-16 h interval

e.g. 6am and 2pm

- Later start or earlier finish (+)
- Can mean less done in a day (-)
- Large volume of milk to harvest in the morning = need good milking routine

3in2

- Could use flexible staff e.g. outsource a milking (+)
- Less consistency e.g. between days and weeks (-)
- 25% fewer milkings (+)

10in7 (3in2 - OAD weekend)

- OAD weekends (+)
- Consistent weeks (+)
- 29% fewer milkings (+)

OAD

- Milk any time during the day (+)
- Increases pool of people available (+)

Can we adapt milking intervals to improve workplace attractiveness?

- ✓ Many flexible milking options available
- ✓ Farmlet results look encouraging for full season
- ✓ More attractive 3in2 milking times possible
- ✓ Understand the ‘why’
- ✓ Plan in advance